DYSART DRAIN NEAR LUKE AIR FORCE BASE
FCD GAGE ID# 5413

STATION DESCRIPTION

LOCATION – The gage is located north of Glendale Avenue and east of Litchfield Road on the north side of Luke Air Force Base housing area. The gaging equipment is located on the north bank of the channel. Latitude N 33° 32' 38.1", Latitude W 112° 21' 1.8". Located in the SE1/4 SE1/4 NW1/4 S03 T2N R1W in the El Mirage 7.5-minute quadrangle.

ESTABLISHMENT – The gage was established at this location on August 22, 1996.

DRAINAGE AREA – 52 mi^2

GAGE – The gage is a pressure transducer type instrument. The transducer is at elevation 0.10 feet gage height, levels of September 3, 1996.

Staff gage needs further attention.

There is one crest gage at this location. The pin elevation is at 1.10 feet gage height. The crest gage is mounted at an angle. The high water mark on the stick is measured along the length of the stick. The length is then compared to a plot of the gage to get the corresponding gage height.

ZERO GAGE HEIGHT - Zero gage height is defined as the low point at the left toe of the channel at the pressure transducer instrument.

HISTORY – Gaging was established on August 22, 1996. Previously, the original channel had been gaged on the south bank near just upstream of Dysart Road. The old gage was in service from June 24, 1994 to January 2, 1995 when it was removed for construction.

REFERENCE MARKS –

RP1 is the low point at the left toe of the channel. The elevation is 0.00 feet gage height.

CHANNEL AND CONTROL – The channel is a trapezoidal shaped concrete lined channel that is straight up and downstream of the gage reach. The channel is the control for all stages.

RATING – The current rating is Rating #1 developed by T. W. Lehman using surveyed cross sections in a step backwater HEC-RAS model. The initial rating was further refined with indirect measurements that occurred just following installation of the gage.

DISCHARGE MEASUREMENTS – Wading measurements could be made for very low flows near the gage section. Higher flows could be measured from the Dysart Road bridge approximately 1/2 mile downstream. Inputs after the gage could affect the discharge measurements.

POINT OF ZERO FLOW – The PZF at the gage cross section is at the left toe and is at 0.00 feet gage height, levels of September 3, 1996.

FLOODS – No flows above about 250 cfs since installation.

REGULATION – There is a detention basin approximately 1.5 miles upstream from the gage location.

DIVERSIONS – None known

ACCURACY – Fair to good

JUSTIFICATION – Monitor flows in the Dysart Channel for LAFB.

UPDATE – July 14, 2011
DE Gardner